Small Business Innovation Research/Small Business Tech Transfer

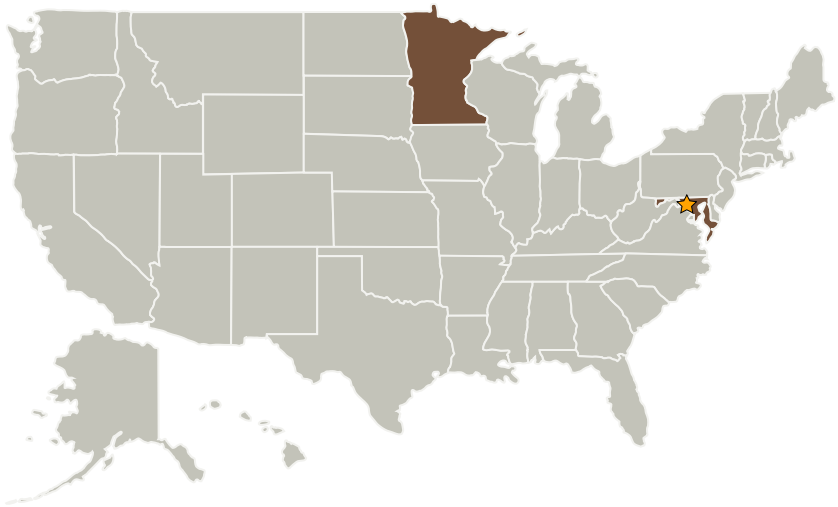
Pulsed Single Frequency MOPA Laser, Phase I

Completed Technology Project (2006 - 2006)

Project Introduction

Latest advances in semiconductor optoelectronics makes it possible to develop compact light weight robust sources of coherent optical pulses, demanded for numerous applications such as lidars. Recent improvements in heterostructure growth and processing technology, as well as new approaches in waveguide design make it possible to integrate single frequency laser diode, saturable absorber, and semiconductor amplifier in one compact device with high wallplug efficiency and long lifetime. In this Phase I project we will design a prototype device, fabricate it and study its basic parameters.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
SVT Associates	Supporting Organization	Industry	Eden Prairie, Minnesota

Primary U.S. Work Locations	
Maryland	Minnesota

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers